



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,089	06/09/2000	John C. Ford	8064.002US0	2891

22434 7590 07/28/2003

BEYER WEAVER & THOMAS LLP
P.O. BOX 778
BERKELEY, CA 94704-0778

EXAMINER

SZMAL, BRIAN SCOTT

ART UNIT	PAPER NUMBER
	3736

DATE MAILED: 07/28/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)
	09/591,089	FORD, JOHN C.
	Examiner Brian Szmal	Art Unit 3736

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,5-8,10,12,14,16-46 and 50-52 is/are rejected.
- 7) Claim(s) 2-4,9,11,13,15 and 47-49 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

Specification

1. The abstract of the disclosure is objected to because the abstract exceeds 150 words. Correction is required. See MPEP § 608.01(b).

Claim Objections

2. Claim 47 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim states “further comprising said markers”, while being dependent upon Claim 41. Claim 41 already claims the use of markers. Therefore, Claim 47 fails to further limit the subject matter of Claim 41.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5-8, 10, 12, 14, 16-46 and 50-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al.

Cheng et al disclose an identification and quantification of needle and seed displacement departures from a treatment plan and further disclose an injection device having a hollow needle with an opening at a tip and a seed depositing means for having a seed pushed therethrough to be deposited in a patient's body through the opening; seed-positioning detecting means for determining the position with reference to a space-fixed coordinate system; real-time seed position determining means for determining the position of the deposited seed with reference to a body fixed coordinate system; a dose calculating means for calculating in real time the radiation dose distribution within a selected volume with respect to a body fixed coordinate system; memory means for storing earlier obtained patient data; coordinate transforming means for identifying the body fixed coordinate system with reference to the earlier obtained data and determining the position of the seed with respect to the space fixed coordinate system; the dose calculating means calculates a hypothetical dose distribution by assuming that a seed has been hypothetically deposited at a position; injector controlling means for making a comparison between the calculated radiation dose and the predetermined distribution plan, and determining the next seed position based upon the comparison; a display for displaying in real time a visual display of the injection needle with reference to the body fixed coordinate system; a real time display of the earlier obtained patient data and the positions of the deposited seeds; affixing markers to selected parts of the body; detecting the markers in real time by a detector which is affixed at a fixed position with reference to the space fixed coordinate system; a seed delivery device comprising a position indicating unit; a position detector configured to

sense the position indicating unit; a computer coupled to the position detector, the computer configured to determine a position of a seed within a patient based on a position of the position indicating unit, and a dose distribution relative to a body fixed coordinate system; the position indicating unit emits or reflects radiative energy; the radiative energy comprises ultrasonic or electromagnetic energy; the position detector comprises a camera; a screen coupled to the computer; and determining the position of the markers comprises using an x-ray imaging system, an ultrasonic imaging system or a CT system. See Figures 1, 2A, 3, and 15; and Paragraphs 0079, 0080, 0119, 0120, and 0160.

Claims 1-22 claim the use of a body fixed coordinate system that is “affixed to” the body, whereas the added claims, Claims 23-52 are directed to a body fixed coordinate system that is based on markers “within” the body. In light of the specification, markers are affixed to the outside of the body by being placed within the body (needle markers of page 5, line 30 and page 6, lines 1-10). The markers of Cheng et al are placed within the body while being affixed to the body as well. See Figure 15. Therefore, Cheng et al also discloses markers that are affixed to the body while being within the body.

Allowable Subject Matter

5. Claims 2-4, 9, 11, 13, 15, 48 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Szmal whose telephone number is (703) 308-3737 and group fax number is (703) 308-0758. The examiner can normally be reached on Monday-Friday, with second Fridays off.

BS
July 18, 2003


MAX F. HINDENBURG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700